

WHAT IS CLAIMED IS:

1. A blade of a rotor assembly, said blade comprising:  
a root portion;  
an airfoil portion extending radially from said root portion;  
5 a shroud extending radially from said airfoil portion, said shroud having a lower portion with a thickness in a radial direction and including at least one reinforcing flange extending radially from said lower portion defining a reinforcing flange height and extending axially along said lower portion defining a reinforcing flange width;  
10 wherein said reinforcing flange height is at least three times greater than the minimum thickness of said shroud lower portion.
2. The blade of Claim 1, wherein said shroud includes at least two reinforcing flanges wherein the sum of all reinforcing flange widths is at least two times greater than the average height of the reinforcing flanges.
- 15 3. The blade of Claim 1, wherein said lower portion extends axially between opposed leading and trailing edges and extends circumferentially between opposed first and second circumferential sides; and wherein said leading edge and trailing edges are tapered in a circumferential direction.
4. The blade of Claim 1, wherein said shroud defines a damper cavity having  
20 an inner diameter surface and an outer diameter surface
5. The blade of Claim 4 wherein said damper cavity inner diameter surface defines an opening therethrough, said opening having at least two opposed ledges.
6. The blade of Claim 1, wherein said shroud defines a constant thickness between said opposed leading and trailing edges and said opposed first and second  
25 circumferential sides.
7. The blade of Claim 1, wherein said reinforcing flange includes a sealing rail extending radially therefrom.
8. A blade of a rotor assembly, said blade comprising:  
a root portion;  
30 an airfoil portion extending radially from said root portion; and  
a shroud extending radially from said airfoil portion, said shroud having a lower portion with a constant thickness in a radial direction and including at least one reinforcing flange extending radially from said lower portion defining a reinforcing

flange height and extending axially along said lower portion defining a reinforcing flange width.

9. The blade of Claim 8, wherein said reinforcing flange height is at least three times greater than the thickness of said shroud.

5        10. The blade of Claim 8, wherein said shroud includes at least two reinforcing flanges wherein the sum of all reinforcing flange widths is at least two times greater than the average height of the reinforcing flanges.

10       11. The blade of Claim 8, wherein said lower portion extends axially between opposed leading and trailing edges and extends circumferentially between opposed first and second circumferential sides; and wherein said leading edge and trailing edges are tapered in a circumferential direction.

12. The blade of Claim 8, wherein said shroud defines a damper cavity having an inner diameter surface and an outer diameter surface.

15       13. The blade of Claim 12 wherein said damper cavity inner diameter surface defines an opening therethrough, said opening having at least two opposed ledges.

14. A blade of a rotor assembly, said blade comprising:

a root portion;

an airfoil portion extending radially from said root portion;

20       a shroud extending radially from said airfoil portion, said shroud having a lower portion with a thickness in a radial direction and wherein said lower portion extends axially between opposed leading and trailing edges and extends circumferentially between opposed first and second circumferential sides; and wherein said leading and trailing edges are tapered in a circumferential direction.

25       15. The blade of Claim 14, wherein said shroud includes at least one reinforcing flange extending radially from said lower portion defining a reinforcing flange height and extending axially along said lower portion defining a reinforcing flange width; and wherein said reinforcing flange height is at least three times greater than the minimum thickness of said shroud lower portion.

30       16. The blade of Claim 15, wherein said shroud includes at least two reinforcing flanges wherein the sum of all reinforcing flange widths is at least two times greater than the average height of the reinforcing flanges.

17. The blade of Claim 14, wherein said shroud defines a constant thickness between said opposed leading and trailing edges and said opposed first and second circumferential sides.

18. The blade of Claim 14, wherein said shroud defines a damper cavity with an inner diameter surface and an outer diameter surface wherein said damper cavity inner diameter surface defines an opening therethrough, said opening having at least two opposed ledges.

5           19. A blade of a rotor assembly, said blade comprising:  
a root portion;  
an airfoil portion extending radially from said root portion; and  
a shroud extending radially from said airfoil portion, said shroud having a lower portion with a thickness in a radial direction, said shroud defining a damper  
10 cavity with an inner diameter surface and an outer diameter surface wherein said damper cavity inner diameter surface defines an opening therethrough, said opening having at least two opposed ledges.

20. The blade of Claim 19, wherein said shroud includes at least one reinforcing flange extending radially from said lower portion defining a reinforcing  
15 flange height and extending axially along said lower portion defining a reinforcing flange width; and wherein said reinforcing flange height is at least three times greater than the minimum thickness of said shroud lower portion.

21. The blade of Claim 20, wherein said shroud includes at least two reinforcing flanges wherein the sum of all reinforcing flange widths is at least two  
20 times greater than the average height of the reinforcing flanges.

22. The blade of Claim 19, wherein said shroud defines a constant thickness between said opposed leading and trailing edges and said opposed first and second circumferential sides.

23. The blade of Claim 19, wherein said lower portion extends axially between  
25 opposed leading and trailing edges and extends circumferentially between opposed first and second circumferential sides; and wherein said leading edge and trailing edges are tapered in a circumferential direction.

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